REMARKS

In view of the following discussion, the Applicants submit that none of the claims now pending in the application is anticipated under the provisions of 35 U.S.C. § 102. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS 1-22 UNDER 35 U.S.C. § 102

The Examiner has rejected claims 1-22 in the Office Action under 35 U.S.C. § 102 as being anticipated by Westerlund et al. (U.S. 6,757,654, issued on June 29, 2004, herein referred to as "Westerlund"). Applicants respectfully traverse the rejection.

Westerlund discloses a forward error correction in speech coding. Specifically, it discloses the use of a primary encoder and a secondary encoder to encode an input signal.

The Examiner's attention is directed to the fact that Westerlund fails to teach or suggest a method for mitigating errors in frames received in a received communication where a difference between two references that are based on the received communication are used to adjust an adaptive codebook gain parameter and a fixed codebook gain, as positively claimed by the Applicants. Specifically, Applicants' independent claims 1 and 12 positively recite:

> 1. A method for mitigating errors in frames of a received communication, comprising:
> modifying said received communication for determining a reference signal;
> modifying said received communication for determining a modified reference signal; and
> adjusting an adaptive codebook gain parameter for an adaptive codebook and a fixed codebook gain based on a difference between the reference signal and the modified reference signal. (Emphasis added)
>
> 12. An apparatus for mitigating errors in frames of a communication, comprising:
> a signal receiver that receives a communication; and
> an error correction device coupled to the signal receiver that modifies said communication for determining a reference signal, modifies said communication for determining a modified reference signal, and adjusts an adaptive codebook gain parameter for an adaptive codebook and a fixed codebook gain based on a difference between the reference signal and the modified reference signal.

(Emphasis added)

Applicants' invention provides a frame erasure concealment device and method that is based on reestimating gain parameters for a code excited linear prediction (CELP) coder. During operation, when a frame in a stream of received data is detected as being erased, the coding parameters, especially an adaptive codebook gain g_p and a fixed codebook gain g_c, of the erased and subsequent frames can be reestimated by a gain matching procedure.

The Examiner asserts that the Applicants rely on certain features such as, modified adaptive codebook vector, modified fixed codebook vector that is equal to c(n), determining new gain vectors g'_p and g'_c decoder and that these limitations are not recited in the claims. Contrary to the Examiner's assertion, those features were presented as a description of the Applicants' invention. The Applicants rely on the arguments that were presented below the description as presented similarly herein. To prevent further confusions, the Applicants herein provide a truncated description and focus on the arguments below as similarly noted in previous responses.

The Applicants respectfully submit that the various sections cited by the Examiner in Westerlund completely fail to teach Applicants' invention. Specifically Westerlund fails to teach, show or suggest adjusting an adaptive codebook gain parameter for an adaptive codebook and a fixed codebook gain based on a difference between the reference signal and the modified reference signal, as positively claimed by the Applicants' independent claims 1 and 12. In contrast Westerlund teaches adjusting the gain parameter (i.e. either LTP gain or fixed) based on a comparison of the previous value of the gain parameter. (See Westerlund, col. 5, lines 1-26.) Westerlund specifically teaches:

> "In this condition, the decoder limits the LTP gain and fixed codebook gain to the value used for the last received good subframe. In other words, if the value of the current LTP gain (g^p) is equal to or less than the last good LTP gain received, then the current LTP gain is used. However, if the value of the current LTP gain is larger than the last good LTP gain received, then the value of the last LTP gain is used in place of the current LTP gain. The value for the gain of the fixed codebook is adjusted in a similar manner." (Westerlund, col. 5, ll. 1-10.)Emphasis added.)

Consequently, the passage cited in Westerlund clearly fails to teach, show or suggest adjusting an adaptive codebook gain parameter for an adaptive codebook and a fixed codebook gain based on a **difference** between the reference signal and the modified reference signal, as taught by the Applicants' invention.

Furthermore, the Examiner cites column 2, lines 15-30 in Westerlund as teaching this limitation of the Applicants' invention. The Applicants respectfully submit that this passage is even less relevant than the previously cited section with regard to the limitation of adjusting an adaptive codebook gain parameter for an adaptive codebook and a fixed codebook gain based on a difference between the reference signal and the modified reference signal. Column 2, lines 15-30 in Westerlund simply teach generating an error signal by comparing successively generated signals to the original signal and producing a synthesized signal closest to the original signal by minimizing the error signal. Nowhere in this passage does it teach, show or suggest adjusting any type of gain based on the comparisons of the successively generated signals and original signal.

In addition, the Examiner cites Column 1, lines 58-60 as reciting the limitation of "determining a reference signal based on the received communication". The Examiner then cites Column 2, lines 11-14 as reciting the limitation of "determining a modified reference signal based on the received communication". It appears that the Examiner is citing the original input voice signal as being a reference signal. Applicants' claim scope is not so broad that would allow this broad interpretation by the Examiner. Specifically, Applicants recite a method for mitigating errors in a received communication. Thus, Applicants' invention is claiming a method that is performed on the decoder where the received communication has errors and not in the encoder as alleged by the Examiner where the original input signal is received. As such, the original voice signal is not available to the decoder.

Finally, Applicants recite that both reference signals (i.e., the reference signal and the modified reference signals) are based on the received communication. In other words, both reference signals are generated from the same received communication. Notably, the reference signal (e.g., $\hat{s}(n)$) and the modified reference signal (e.g., $\hat{s}'(n)$) are each derived from a received communication. The Applicants have amended

claims 1 and 12 in order to clarify the limitation that the received communication (e.g., the input signal) is modified. This is supported by the Applicants' specification, namely on page 6, paragraph 29 (also see FIG. 2) which describes that excitation sign u(n) and modified excitation signal u'(n) are processed by separate filters to produce the reference signal $\hat{s}(n)$ and the modified reference signal $\hat{s}'(n)$, respectively. Conversely, Westerlund teaches an unprocessed and unmodified original voice signal (i.e., the input signal) being used as a reference signal. This is confirmed by the Examiner who alleges (see page 2 of Advisory Action dated 10/31/2005) that the "input speech, which is a received communication segmented into frames, serves as a reference signal...." The Examiner is thus incorrectly interpreting the Applicants' claims 1 and 12 to define a reference signal and the received communication to be one and the same. Furthermore, there is no inference in the Applicants' specification or claim language to imply that the reference signal and original voice signal are identical. Consequently, the Applicants contend that original voice signal taught in Westerlund is not tantamount to the reference signal claimed by the Applicants. Thus, Westerlund fails to anticipate Applicants' independent claims 1 and 12.

Dependent claims 2-11, and 13-22 depend from claims 1 and 12 and recite additional limitation, respectively. As such, and for the exact same reason set forth above, the Applicants submit that claims 2-11, and 13-22 are also not anticipated by the teachings of Westerlund. Therefore, the Applicants submit that claims 1-22, as they now stand, fully satisfy the requirements of 35 U.S.C. §102 and are patentable thereunder.

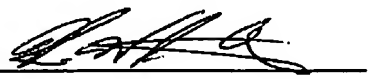
Conclusion

Thus, the Applicants submit that all of these claims now fully satisfy the requirements of 35 U.S.C. §102. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

May 30, 2006



Kin-Wah Tong, Attorney
Reg. No. 39,400
(732) 530-9404

Patterson & Sheridan, LLP
595 Shrewsbury Avenue
Shrewsbury, New Jersey 07702